

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims:

1. (Currently amended): A method for determining whether to initiate a multicast service from a first base station of a first cell, the method comprising:

receiving a user message transmitted by user equipment positioned in a second cell, wherein the first cell is a neighbour of the second cell, and wherein the user message includes a list of at least one neighbouring cell ~~one or more neighbouring cells~~; and

in response to the user message, initiating the multicast service in the first cell, wherein the first cell is listed in the list of at the least one neighbouring cell ~~one or more neighbouring cells~~ and the selection of the first cell to initiate the multicast service is not by the user equipment.

2. (Original): The method of claim 1, further comprising:

transmitting, in the second cell from a second base station, a network message to request the user equipment positioned in the second cell to provide neighbouring cell information;

wherein the user message is in response to the network message.

3. (Currently amended): The method of claim 1, wherein the list of the at least one neighbouring cell ~~one or more neighbouring cells~~ is a list of neighbouring cells the user equipment could use for combining if the multicast service is initiated in the listed neighbouring cell.

4. (Currently amended): The method of claim 1, wherein the list of the at least one neighbouring cell ~~one or more neighbouring cells~~ indicates base stations that the user equipment could use for combining if the multicast service is transmitted by the indicated base station.

5. (Currently amended): The method of claim 1, wherein the list of the at least one neighbouring cell ~~one or more neighbouring cells~~ indicates base stations that the user equipment could use for combining.

6. (Currently amended): The method of claim 1, wherein the list of the at least one neighbouring cell ~~one or more neighbouring cells~~ indicates base stations having transmissions that the user equipment is able to demodulate.

7. (Currently amended): The method of claim 19, wherein the list of the at least one neighbouring cell ~~one or more neighbouring cells~~ indicates base stations having transmissions that the user equipment is able to demodulate.

8. (Currently amended): The method of claim 1, wherein the list of the at least one neighbouring cell ~~one or more neighbouring cells~~ indicates base stations having transmissions that the user equipment is able to detect.

9. (Currently amended): The method of claim 1, wherein the user message further includes a signal measurement for each cell in the list of the at least one neighbouring cell ~~one or more neighbouring cells~~.

10. (Currently amended): The method of claim 9, wherein the signal measurement is indicative of at least one ~~one or more~~ of a signal quality, an error rate, a received signal power level, or a signal-to-noise ratio.

11. (Original): The method of claim 9, wherein the signal measurement is indicative of a beacon signal power.

12. (Original): The method of claim 9, wherein the signal measurement is indicative of a pilot signal power.

13. (Original): The method of claim 9, wherein the signal measurement is indicative of signal power of an existing multicast transmission.

14. (Previously presented): The method of claim 1, further comprising transmitting from a second base station in the second cell, an initial message to indicate to the user equipment a list of cells that are neighbours to the second cell.

15. (Previously presented): The method of claim 1, further comprising transmitting from a second base station in the second cell, an initial message to wake the user equipment positioned in the second cell from an idle mode.

16. (Original): The method of claim 15, wherein the initial message is a page notification message including a set of indicators corresponding to a respective set of multicast services, and wherein each of the indicators indicates whether the second base station is transmitting an updated multicast control channel message.

17. (Original): The method of claim 2, wherein the network message includes a cause value that indicates an enhanced counting procedure is invoked for the multicast service.

18. (Previously presented): The method of claim 1, further comprising allowing the user equipment to join the multicast service.

19. (Currently amended): A method for determining whether to initiate a multicast service in a group of cells in a network, the method comprising:

receiving ~~one or more user messages~~ at least one user message transmitted by a respective ~~one or more~~ at least one user equipment positioned in the group of cells in the network, wherein ~~each one or more user messages~~ the at least one user message includes a list of at least one neighbouring cell ~~one or more neighbouring cells~~ and a request for multicast service; and

for each cell of the group of cells, accumulating a first count of the user messages having the cell included in the list of the at least one neighbouring cell ~~one or more neighbouring cells~~;

for each cell of the group of cells, initiating the multicast service in the cell if the first count for the cell is not zero;

for each cell of the group of cells, accumulating a second count of the user messages received from user equipment in the cell; and

initiating the multicast service in a cell if the second count for the cell is not zero.

20. (Canceled)

21. (Previously presented): The method of claim 19, wherein initiating the multicast service in a cell if the second counter for the cell is not zero includes:

initiating a point-to-point multicast service in the cell if a sum of the first count and second count is less than a threshold number; and

initiating a point-to-multipoint multicast service in the cell if the sum of the first count and second count is greater than the threshold number.

22. (Previously presented): The method of claim 19, wherein initiating the multicast service in a cell if the first count for the cell is not zero includes:

initiating a point-to-point multicast service in the cell if the first count is less than a threshold number; and

initiating a point-to-multipoint multicast service in the cell if the first count is greater than the threshold number.

23. (Original): A method to assist in determining whether to initiate a multicast service within a mobile radio network, wherein user equipment is positioned in a first cell of a first base station having a group of neighbouring cells, the method comprising:

determining, for each neighbouring cell in the group of neighbouring cells, whether the user equipment can detect the neighbouring cell;

generating a user message indicating which of the neighbouring cells the user equipment can detect;

transmitting the user message; and

receiving a network message generated responsive to the user message, wherein the network message indicates a new transmission of the multicast service by a second base station in a second cell; wherein the second cell is indicated in the user message.

24. (Original): The method of claim 23, further comprising:

receiving a first signal from the first base station transmitting the multicast service;

receiving a second signal from the second base station transmitting the multicast service;
and
combining the first and second signals.

25. (Previously presented): The method of claim 23, wherein a base station transmission that the user equipment can detect is combined if the multicast service is enabled on the base station.

26. (Canceled):

27. (Previously presented): The method of claim 23, further includes:
determining a signal measurement for each of the neighbouring cells;
wherein the user message further includes the signal measurement for each of the neighbouring cells.

28. (Previously presented): The method of claim 23, further includes:
determining a signal measurement for each of the neighbouring cells that are detected;
wherein the user message further includes the signal measurement for each of the neighbouring cells that are detected.

29. (Original): The method of claim 28, wherein the signal measurement is indicative of a received beacon signal power.

30. (Original): The method of claim 28, wherein the signal measurement is indicative of a received pilot signal power.

31. (Cancelled)

32. (Cancelled)

33. (Previously presented): A method of signalling between user equipment and a network across an air interface, wherein the user equipment is positioned in a first cell created by a first base station, wherein a set of neighbouring base stations create a respective set of neighbouring

cells, and wherein the first base station transmits on a downlink and the user equipment transmits on an uplink, the method comprising:

- signalling, on the downlink, a first list of all neighbours of the first base station;
- signalling, on the downlink, an initiation of a counting procedure for a multicast service;

and

- signalling, on the uplink, a second list including an indication of acceptable cells from the first list.

34. (Original): The method of claim 33, further comprising signalling, on the uplink, a third list including a signal measurement for each of the acceptable cells from the second list.

35. (Currently amended): A method of requesting a multicast service by user equipment in a first cell, wherein the first cell created by a first base station, and wherein the first base station has a group of neighbouring cells created by a respective group of neighbouring base stations, the method comprising:

- determining, for at least one ~~one or more~~ of the neighbouring cells, whether a signal from the respective neighbouring base station is receivable by the user equipment;

- creating a first list from the receivable neighbouring cells;

- determining a signal measurement for each receivable neighbouring cell;

- generating a user request message, wherein the user request message includes ~~a request for a multicast service and the first list of receivable neighbouring cells~~ a request for a multicast service, the first list of receivable neighbouring cells, and the signal measurement for each cell in the list of receivable neighbouring cells; and

- transmitting the user request message from the user equipment to the first base station.

36. (Previously presented): The method of claim 35, wherein creating a list from the receivable neighbouring cells includes:

- determining whether the receivable signal is combinable by the user equipment; and
- including in the first list an indication of cells determined to be combinable.

37. (Canceled)

38. (Currently amended): A method to initiate a multicast service in a group of cells neighbouring a first cell, the method comprising:

transmitting a network message to initiate a response from a user equipment in the first cell;

receiving a user message transmitted by the user equipment positioned in the first cell;
and

in response to the user message, initiating the multicast service in only the group of cells neighbouring the first cell.